

**STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT
OIL CONSERVATION DIVISION**

**IN THE MATTER OF THE HEARING CALLED
BY THE OIL CONSERVATION DIVISION FOR
THE PURPOSE OF CONSIDERING:**

**APPLICATION OF COG OPERATING LLC FOR
SPECIAL RULES AND REGULATIONS FOR THE
ARTESIA-GLORIETA-YESO POOL *ET AL.*, LEA AND
EDDY COUNTIES, NEW MEXICO.**

**CASE NO. 14613
Order No. 13382-B**

ORDER OF THE DIVISION

BY THE DIVISION:

This case came on for hearing at 8:15 am on April 14, 2011, at Santa Fe, New Mexico, before Examiner Richard I. Ezeanyim.

Now, on this 20th day of April, 2011, the Division Director, having considered the testimony, the record and the recommendations of the examiner,

FINDS THAT:

(1) Due public notice has been given, and the Division has jurisdiction of this case and of the subject matter.

(2) The applicant, COG Operating LLC ("COG" or "Applicant"), seeks the establishment of special pool rules governing thirteen (13) pools in Lea and Eddy Counties, New Mexico, including a depth bracket allowable of 300 barrels of oil per day, no limiting gas-oil ratio, and cancellation of its overproduction. Apache Corporation ("Apache") supports the Application.

(3) At a pre-hearing conference held on April 5, 2011, it was revealed that COG had shut-in seventy-three (73) of its wells, and Apache had shut-in approximately thirty (30) of its wells in order to prevent further over-production. Both COG and Apache opined that production from these wells cannot be curtailed, therefore, the wells had to be shut-in. Accordingly, the Division informed COG and Apache that shutting-in the wells to prevent further over-production is **NOT** acceptable, and is not in the interest of conservation and prevention of waste.

(4) This case was then set for hearing on April 14, 2011, for the limited purpose of determining whether the wells operated by COG and Apache should continue to be shut-in or be produced at unit allowable until a decision is rendered on COG's application for special rules to increase the allowable in certain pools.

(5) At the hearing, COG appeared through counsel and presented the following testimony:

(a) COG has been monitoring its wells each month and shutting in wells which are overproducing or are likely to overproduce in a spacing and proration unit to avoid exceeding the allowable. This proactive management means that oil and gas production is maximized and a minimum number of wells need to be shut-in.

(b) When the wells are shut-in, there are risks to the wells and the reservoir. Oil and gas production can be reduced due to increased hydrostatic pressure which causes an increase in the gas-oil ratio (GOR). This increase in the GOR increases the risk of waste in reservoir energy and may ultimately reduce total oil recovery.

(c) COG has to shut-in wells because it does not have chokes on its wells. However, even if COG installed chokes on the wells, it would then be an iterative, time consuming process to ensure the wells are producing at the allowable.

(d) While it is possible to employ other methods to curtail production, such as changing the surface stroke and run-time, this is also an iterative process and will take a period of time per well to ensure it is producing at the allowable. This problem is magnified by the fact that COG has a large number of wells (approximately 1500) that would require adjustment. Further, current facilities make it difficult to add more well tests to the current operations. The adjustments and tests required to ensure the wells are producing at the existing allowable may not be feasible during this interim time while the matter is waiting to be heard on the merits.

(e) There are also operational risks to the wells whether they are shut-in or curtailed. Maintaining high fluid levels in the wellbores minimizes the effectiveness of corrosion and scale inhibition and increases the risk of cross-flow between formation waters (particularly the Blinbry and Paddock). These formation waters are incompatible from a mineral content standpoint and could have a higher risk of precipitation of scale in the formation, causing potential damage to the reservoir. By allowing fluid levels to build and hydrostatic pressure to increase in the wellbore, the result could potentially reduce overall oil and gas production.

(6) Apache appeared at the hearing through counsel and presented the following testimony:

(a) Apache operates approximately 236 wells in five of the pools that are involved in the Application.

(b) Apache began operating its wells in October 2010 and inherited an overproduction from the prior operator.

(c) When Apache discovered the overproduction, it immediately shut-in the wells and then began a program closely monitoring production and shutting in wells located in a production unit which is in danger of exceeding the allowable for the month.

(d) Apache has continued to shut in wells on a rotating basis because, in its operational judgment, such practice presents a lower risk of damage to the wells and the producing formation because it is better able to treat corrosion and scale.

(e) Restricting production for the wells will result in the accumulation of fluids which will prevent a full cycle of treatment for scale and bacteria. Although a corrosion program can be developed to treat corrosion, scale cannot be effectively treated unless the wells are operated at their optimum rate that allows for a full treatment.

(f) Scale cannot be effectively treated once it develops and it takes approximately 6 months before scale buildup causes operational problems. Scale can result in the wells having to be re-perforated at a cost of approximately \$50,000.

(7) Burnett/Hudson appeared at the hearing and presented the following testimony:

(a) Burnett/Hudson have approximately 80 wells total in some of the pools and they have curtailed production on certain of those wells through mechanical adjustments.

(b) The current allowables for the pools should be increased to 240 barrels of oil per day per proration unit because the current rules are insufficient to accommodate the increased production that has resulted from new completion techniques and changes in technology.

The Division concludes as follows:

(8) Evidence presented at the preliminary hearing indicated that the wells are producing from solution gas drive reservoirs. When the wells are shut-in in such reservoirs, there is considerable increase in gas-oil ratio (GOR), and this increase in gas-oil ratio reduces the reservoir energy which ultimately leads to reduced oil recovery.

(9) Instead of shutting-in the wells, production from the wells can be curtailed by time-clocks or stroke length adjustment to ensure that the units allowable are not

exceeded. Corrosion and scaling are normal industry problems, and operators know how to deal with them on a daily basis.

(10) It is not acceptable to shut-in the wells for the purpose of preventing over-production, because it is not in the interest of conservation, and has the potential to cause waste by reducing ultimate production from the reservoir.

IT IS THEREFORE ORDERED THAT:

(1) During the pendency of this proceeding, all parties to this proceeding shall return wells which had been shut-in to production immediately.

(2) Further, the parties shall produce their wells up to the existing allowable for the applicable pool. Any new wells drilled may produce at the test allowable pursuant to Division rules, and then curtail production to unit allowable.

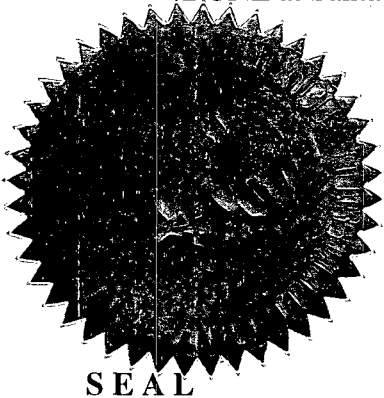
(3) No well shall be shut-in for the purpose of preventing over-production.

(4) A hearing on the merits of this case shall be held on May 16-17, 2011 on a special hearing docket. The parties shall file their Pre-Hearing Statements, and exchange exhibits, on May 9. A Pre-Hearing Conference is scheduled for May 11 at 9:00 am to attempt to narrow the issues in controversy.

(5) This Interim Order shall remain in effect until the Division issues a final order in this case, unless the Division otherwise orders.

(6) Jurisdiction of this case is retained for the entry of such further orders as the Division may deem necessary.

DONE at Santa Fe, New Mexico on the day and year hereinabove designated.



**STATE OF NEW MEXICO
OIL CONSERVATION DIVISION**

A handwritten signature in black ink, appearing to read "Jami Bailey".

**JAMI BAILEY
Director**